

amended herein to improve its grammatical and idiomatic form. Applicant respectfully submits that no new matter has been added.

Claim 13 was objected to under 37 C.F.R. 1.75(c) for allegedly being of improper dependent form. Without conceding the propriety of this objection, to expedite prosecution, Applicant has cancelled Claim 13, thus rendering the objection moot.

Claims 1-4 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Flynn et al. (U.S. Patent No. 6,427,905). Claims 5 and 7-8 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Popat et al. (U.S. Patent No. 6,001,209). Claim 6 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Popat et al. in view of Burke (EP 488813 A2). Claims 9-10 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Popat et al. in view of Goto. (U.S. Patent No. 6,222,576). Claims 11-13 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Flynn et al. in view of Goto.

Before addressing the merits of the rejections, Applicant believes it will be helpful to review some features and advantages of the present invention. As recited in independent Claim 1, the invention relates to a printing paper comprising a center portion having a rectangular form, and outside portions connected to the center portion at both sides of the center portion. At least one of the center portion and the outside portions are formed so that four corners of the center portion have a round shape after removing the outside portions from the center portion. As recited in independent Claim 5, the invention also relates to a label printing paper comprising an image receiving layer releasably laminated on a supporting layer. The label printing paper has a center portion having a rectangular form and outside portions. The outside

portions are connected to the center portion at both sides of the center portion. At least one of the center portion and the outside portions are formed so that the four corners of the center portion have a round shape after removing the outside portions from the center portion. As recited in dependent Claims 9-11 and 14, the invention also relates to a printing process and a printing system using the printing paper or label printing paper recited in Claims 1 and 5.

When printing is conducted, the outside portions can be used as a holding portion for the printing apparatus to hold the printing paper. Thus, an image can be formed over substantially all of the center portion. Moreover, after an image is formed, the outside portions are removed, thereby providing a print (the center portion) having the image over substantially its whole surface, and which is easily held in a holder due to the corners having a rounded shape. (See the specification at page 10, lines 5-22).

In Applicant's view, the cited references do not teach or suggest the claimed invention

Flynn et al. relates to an envelope assembly comprising a sheet of material having offset tearable lines and that can be used to store CD's and the like. However, the center portion of the envelope assembly of Flynn et al. has at least two flaps and thus is not in a rectangular form. In addition, as is apparent from Figure 1 in Flynn et al., the center portion of the envelope assembly has more than four corners following removal of the outside portions from the center portion.

Popat et al. discloses a divisible laser note sheet comprising a backing sheet on which a plurality of label layers are provided. However, the center portion of the sheet of Popat

et al. is connected to outside portions along its entire perimeter. It therefore does not disclose portions connected to the center portion at both sides of the center portion.

Applicant submits that neither Flynn et al. nor Popat et al. teaches or suggests a printing paper or label printing paper comprising a center portion having a rectangular form, and outside portions connected to the center portion at both sides of the center portion, wherein at least one of the center portion and the outside portions are formed such that four corners of the center portion have a round shape after removing the outside portions from the center portion. Accordingly, Applicant concludes that neither Flynn et al. nor Popat et al. anticipates or renders obvious the claimed invention.

Applicant also submits that the secondary references Burke (which is cited for disclosing a label assembly with an information receiving sheet and a supporting sheet which are both perforated) and Goto (which is cited for teaching a printer which includes a conveyor roller pair and a print head) do not teach or suggest the aforementioned features of the claimed invention, either. Thus, they do not remedy the deficiencies of Flynn et al. and Popat et al.

For the foregoing reasons, Applicant submits that the present invention, as recited in independent Claims 1 and 5, is patentably defined over the cited references, whether taken singly or in the combinations proposed by the Examiner. The dependent claims are also submitted to be patentable for the reasons given regarding independent Claims 1 and 5, as well as for the patentable features recited therein. Individual consideration of the dependent claims is requested.

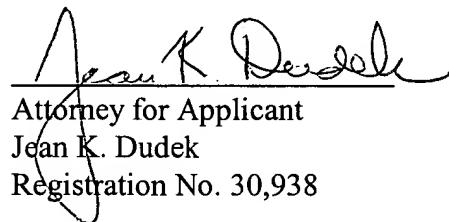
Application No.: 09/835,443
Docket No.: 03500.015299.

Applicant believes that the instant application is in condition for allowance.

Favorable consideration, withdrawal of the rejection and issuance of an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The paragraph starting at page 1, line 6 and ending at line 14, has been amended as follows:

--The present invention relates to a printing paper which is suitable for use in printing apparatus, and more particularly to a printing paper for providing a print having a particular form, in which an image is printed over substantially the whole surface thereof by an image forming apparatus which [reciprocatorily] moves in a reciprocating manner printing paper to form plural images of various colors so as to overlap each other, thereby giving a color image[.]. The present invention also relates to a print forming process and a printing system.--

The paragraph starting at page 1, line 16 and ending at page 2, line 10, has been amended as follows:

--With the [spreading] increased popularity of apparatus from which image data can be obtained with ease, such as digital video cameras and digital cameras, there is recently an [increased] increase in demand for color image printing apparatus[,] which form a color image on printing paper on the basis of the [resultant] image data obtained. Printing systems of such color image printing apparatus include, for example, a thermal transfer system and the like. Printing [of] using the thermal transfer system is conducted by arranging an ink sheet, on which a thermal sublimation or hot-melt ink has been coated, in close vicinity to printing paper, selectively heating the ink sheet by a thermal head to transfer the sublimated or melted ink to the printing

paper, thereby forming an ink image on the printing paper. A thermal transfer printing apparatus, in particular, a sublimate-type thermal transfer printing apparatus, by which such printing of the thermal transfer system is conducted, [is expected to be applied to the] may be used as a printing apparatus[,which] to conduct printing on printing paper on the basis of image data obtained from a digital camera or the like[, since] to provide a high-quality full-color image [can be provided].--

The paragraph starting at page 2, line 11 and ending at line 24, has been amended as follows:

[On the other hand, concerning other apparatus] Apparatus for forming a high-quality full-color image other than [the] those described above [apparatus], for example, Print Club (trade name) by which a photographic image is formed on a small[-sized] size sticker [which] that can be easily stuck on a purse, pocket notebook or the like, and films equipped with a lens, which is portable to take photographs[,] and the like have been [spread] widely used in recent years. Owing to [spreading] the increased popularity of these apparatus, prints with high-quality full-color images have [come to be] been utilized [for the purpose of sticking or putting them on or] in a form that can be stuck on or put into purses or pocket notebooks to be carried around [always carry] so [as to suitably] that one can appreciate them or show or exchange them [to one another among a plurality of people] with others.--

The paragraph starting at page 2, line 25 and ending at page 3, line 17, has been amended as follows:

--Therefore, prints in the form that can be stuck on or put into purses, pocket notebooks or the like to be carried around [always carry] are required even of prints prepared by means of a digital camera or the like. There is thus a demand for the development of a printing system which can form such a print. More specifically, with the [spreading] increased popularity of telephone cards, credit cards and the like, purses and pocket notebooks[, into which] where such cards [of such a size] can be [put] stored with ease[,] have been [spread] widely used. Therefore, there is a demand for the development of a printing system which can form a print of the same size as such [a card] cards. The specific form of the telephone cards and credit cards [heretofore] in use is a rectangle of 54 mm × 85.5 mm as illustrated in Fig. 12, [and] with their four corner edges [are] rounded in the form of an arc and having a curvature radius R of 4 mm. On the other hand, as printing paper which can provide prints that can be stuck on optional articles, there is so-called label type printing paper (label printing paper) of a constitution like a sticker.--.

Please substitute the paragraph starting at page 3, line 18 and ending at page 4, line 5 has been amended as follows:

--[When it is intended to] To obtain a print [of] in such a form, the printing paper is generally required to be [reciprocatorily] moved in a reciprocating manner in a printing apparatus, such as a thermal transfer providing apparatus, to form [which forms] plural images of

various colors so as to overlap each other, thereby giving a color image[, such as a thermal transfer printing apparatus]. [Accordingly, any] As a result, image cannot be formed on at least a [part] portion of the ends of the printing paper because the printing paper is required to be supported without detaching it upon printing. Therefore, the resulting print contains a blank portion. In other words, since the size of an image which can be formed is limited in the color image printing apparatus, it is impossible to provide a print in which an image has been formed over the whole surface thereof like a silver salt photograph.--.

The paragraph starting at page 7, line 25 and ending at page 8, line 7, has been amended as follows:

--It is an object of the present invention to provide printing paper usable in a color image forming apparatus which reciprocatorily moves printing paper to form plural images of various colors so as to overlap each other, thereby giving a color image[, and] It is also an object of the present invention to provide a printing process and a printing system capable of providing a print having a form that is easy to be held without striking on a holder or being caught thereby upon [putting the print] being put into the holder, and in which an image [is] can be printed over substantially the whole surface thereof[, a print forming process and a printing system].--.

The paragraph starting at page 13, line 15 and ending at page 14, line 3, has been amended as follows:

--In a thermal transfer printing apparatus, in which inks of plural colors are used to form images of plural colors by [reciprocatorily] moving the printing paper in a reciprocating manner so as to overlap each other, thereby forming a color image, printing positions of the plural ink images must be exactly matched with each other. Therefore, the printing paper is required to be held without being released until formation of the ink images of the respective colors is completed. Accordingly, the printing system according to the present invention making use of the label printing paper having portions which lie nearer to an end than the easy-cut structure, and do not need to be printed and can be used as a support, can be suitably applied in particular to a printing system using such a printing apparatus.--.

The paragraph starting at page 20, line 26 and ending at page 21, line 12, has been amended as follows:

--According to this printing paper, the size of the print after the outside portions 14 which lie outside the perforations 12 have been cut off is preferably 52.0 to 56.0 mm in short-side length and 83.5 to 87.5 mm in long-side length, particularly 54 mm in short-side length and 85.5 mm in long-side length. This size is equal to the size of a telephone card or credit card and [a size] is convenient for putting into a purse or pocket notebook to carry it. As described above, the perforations are desirably formed at positions with [which] a ratio of the long side to the short side amounts to about 855 to 540 when the outside portions 14 have been cut off.--.

The paragraph starting at page 22, line 17 and ending at page 23, line 12, has been amended as follows:

--Printing paper according to another embodiment of the present invention is illustrated in Figs. 8, 9A and 9B. This printing paper has substantially a rectangular form and is provided with easy-cut structures 15, extending straight parallel to the short side of the printing paper in the vicinity of both ends of the long side, by which the printing paper can be easily cut. [As the easy-cut structure 15 by which the printing paper can be easily cut,] It is preferred that the easy-cut structure is a perforation. In the upper and lower portions at which the perforation 15 intersects with the long side, [are provided] notches having an edge that is smoothly connected to the perforation 15 and to the long side of the printing paper and smoothly curved in the form of a curve convex toward the outside of the printing paper are provided. Outside portions 17 which lie outside the perforation 12 are connected to a center portion 16 via a straight line portion located between the curved edges. The outside portions 17 can be easily cut off from the center portion 16. By cutting off the outside portions 17, the center portion 16 of the printing paper can be made in a form in which four corner edges thereof are rounded.--.

The paragraph starting at page 27, line 12 and ending at page 28, line 6, has been amended as follows:

--As [a] to the material of the receiving layer 23, any material may be used [so far] as long as it is a resin which easily receives a sublimate or melting coloring material (ink) transferred from an ink sheet by heating. For example, [a] materials [heretofore in use,] such as

[a] polyester resin, polybutyral resin, polyurethane resin, polyvinyl chloride resin, polyvinyl acetate resin or vinyl chloride-vinyl acetate copolymer resin[,] may be used. Various kinds of plasticizers, antioxidants, ultraviolet absorbents, fluorescent brightening agents and the like may be mixed into [such a] the resin. As needed, a layer for preventing abnormal transfer may be provided on the receiving layer 23. As for the abnormal transfer-preventing layer, for example, an ultraviolet curable silicone resin, thermosetting silicone resin, fluorine-containing resin or the like may be used. Alternatively, various kinds of modified silicone oils, fluorine-containing oils, waxes and/or various kinds of surfactants may be mixed into the receiving layer 23. The thickness of the receiving layer is preferably 5 to 50 μm , more preferably 15 to 30 μm --.

The paragraph starting at page 28, line 7 and ending at line 15, has been amended as follows:

--As for the sealing substrate 24 and supporting substrate 27, [may be used] a film of a polymer such as polyester, polyethylene, polypropylene, polystyrene or polycarbonate, a film obtained by incorporating additives such as a filler and a softening agent into such a film, a laminate of these films, or a foam formed of such a material may be used. No particular limitation is imposed on the thickness of the substrate. However, it is preferably 10 to 50 μm --.

The paragraph starting at page 28, line 16 and ending at line 22, has been amended as follows:

--As for the adhesive layer 25, [may be used] an ordinary rubber adhesive or acrylic adhesive may be used. The thickness of the adhesive layer is about 5 to 30 μm . The releasing layer 26 can be formed by applying an ordinary ultraviolet curable silicone resin or thermosetting silicone resin to the supporting substrate 27, and the thickness thereof is preferably 0.05 to 0.5 μm --.

The paragraph starting at page 28, line 23 and ending at line 25, has been amended as follows:

–[A specific preparation] An example of the preparation of the label printing paper according to the present invention will be now described.--.

The paragraph starting at page 31, line 9 and ending at line 24, has been amended as follows:

--Printing is conducted on the label printing paper described above in the same manner as in the printing paper illustrated in Figs. 2 to 4A and 4B and Figs. 8 to 11A and 11B[,]. [and the] The outside portions 14, which lie outside the easy-cut structure 12 of the printing paper discharged from the printing apparatus, [by which the paper can be easily cut,] are cut off as illustrated in Fig. 7, [,whereby the] The center portion 13 left after the cutting can be provided as a print in which an image has been formed over the whole surface thereof as illustrated in Fig.

4B. The resultant print has a form in which four corner edges thereof are rounded because the easy-cut structure 12, by which the paper can be easily cut, is formed in the above-described manner. Namely, the print has a form that is easy to be held and will not strike [without striking on a] the holder or being caught [thereby] by the holder when being put into a holder--.

The paragraph starting at page 31, line 25 and ending at page 32, line 13, has been amended as follows:

--When the print is used [by] for sticking [it] on an article [without putting it] rather than being put into a purse, pocket notebook or the like [to carry it], only the center portion 13 of the image-receiving layer portion 21 [may] needs to be separated for use without cutting off the outside portion 14 of the supporting layer portion 22 along the perforation 12b. In this case, the outside portion 14 of the supporting layer portion 22 can be used as a supporting member upon the separation of the center portion 13 of the image-receiving layer portion 21, or used as a guide upon inserting a nail or the like between the image-receiving layer portion 21 and the supporting layer portion 22 at the portion of the cutting line 12a, thereby separating the image-receiving layer portion 21 from the supporting layer portion 22 with ease.--.

The paragraph starting at page 32, line 14 and ending at line 22, has been amended as follows:

--As described above, [according to] the present invention, [there can be provided] provides prints capable of being stuck on optional articles, and having a form [which

is] that can be easily put in a holder such as a purse, pocket notebook or card case without [causing such problems that the prints are hard to be ut into the holder due to] striking on the holder or being caught thereby[.]. The present invention also provides a print forming process and a printing system which provide a print in which an image has been formed over substantially the whole surface thereof.--.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

1. (Amended) Printing paper comprising:

a center portion having a rectangular form, [curved edge connecting adjacent sides to each other at four corners] and

outside portions connected to the center portion at both sides of the center portion, [at least one straight line portion of said sides, wherein the center portion and the outside portions are connected to each other through a structure by which the printing paper can be cut.]

wherein at least one of the center portion and the outside portions are formed so that four corners of the center portion have a round shape after removing the outside portions from the center portion.

2. (Amended) The printing paper according to Claim 1, wherein [the structure by which] the printing paper [can be cut is a perforation] has perforations between the center portion and the outside portions.

4. (Amended) The printing paper according to Claim 1, wherein the [form of the curved edge] round shape is an arc form.

5. (Amended) Label printing paper, [which is substantially in the form of a rectangle,] comprising [a supporting layer portion and] an image-receiving layer [portion] releasably laminated on [the] a supporting layer [portion and] the label printing paper having a center portion having a [curved edge connecting adjacent sides to each other at four corners] rectangular form and outside portions, wherein the outside portions are connected to the center portion at [at least one straight line portion of said sides, wherein the center portion and the outside portions are connected to each other through a structure by which the printing paper can be cut] both sides of the center portion, and at least one of the center portion and the outside portions are formed so that the four corners of the center portion have a round shape after removing the outside portions from the center portion.

6. (Amended) The label printing paper according to Claim 5, wherein [the structure by which] the printing paper [can be cut is formed of a cutting line formed in the image-receiving layer portion and a perforation formed in the supporting layer portion] has perforations between the center portion and the outside portions.

8. (Amended) The label printing paper according to Claim 5, wherein the [form of the curved edge] round shape is an arc form.

9. (Amended) A [print forming] printing process [using the printing paper according to Claim 1 or 5] comprising the steps of:

providing a printing paper according to Claim 1;

conveying the printing paper while holding the outside portions of the printing paper[,];

conducting printing on the center portion of the printing paper; and

cutting off the outside portions of the printing paper from the center portion.

10. (Amended) A [print forming] printing process [using the printing paper according to Claim 5] comprising the steps of:

providing a label printing paper according to Claim 5;

conveying the label printing paper while holding the outside portions of the printing paper[,];

conducting printing on the center portion of the label printing paper; and

separating the image-receiving layer [portion of] at the center portion from the supporting layer [portion].

11. (Amended) A printing system comprising:
[the] a printing paper according to Claim 1 [or 5], a [printing] print head for
conducting printing on the center portion of the printing paper, and a pair of conveyer rollers for
[conveying the printing paper while] holding the outside portions of the printing paper to convey
the printing paper.